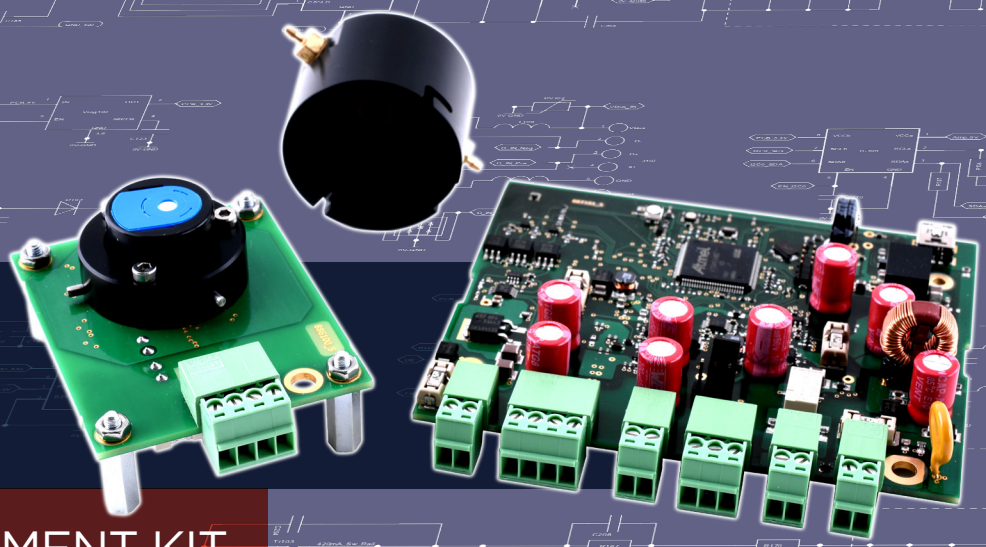
SDK

SENSOR DEVELOPMENT KIT



ENABLING FAST INTEGRATION
OF THE MINIPID SENSOR

ionscience.com/usa

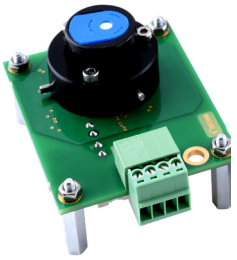
Pioneering Gas Sensing Technology.

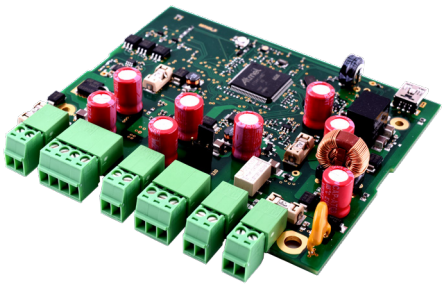
HIGH PERFORMANCE SENSOR DEVELOPMENT KIT FOR THE MINIPID 2 PHOTOIONISATION DETECTION SENSOR OFFERS A FAST, SIMPLE, COST EFFECTIVE SOLUTION FOR TESTING AND INTEGRATION

The ION Science sensor development kit (SDK) is a cost effective, efficient way to test and integrate the ION Science photoionisation detection (PID) sensors into any application. The SDK is comprised of a sensor PCB, an integration PCB and a gas delivery hood.

Sensor PCB

The sensor PCB provides a breakout of the sensor pins, making it easier to supply power to a PID sensor and read the raw analogue output signal.



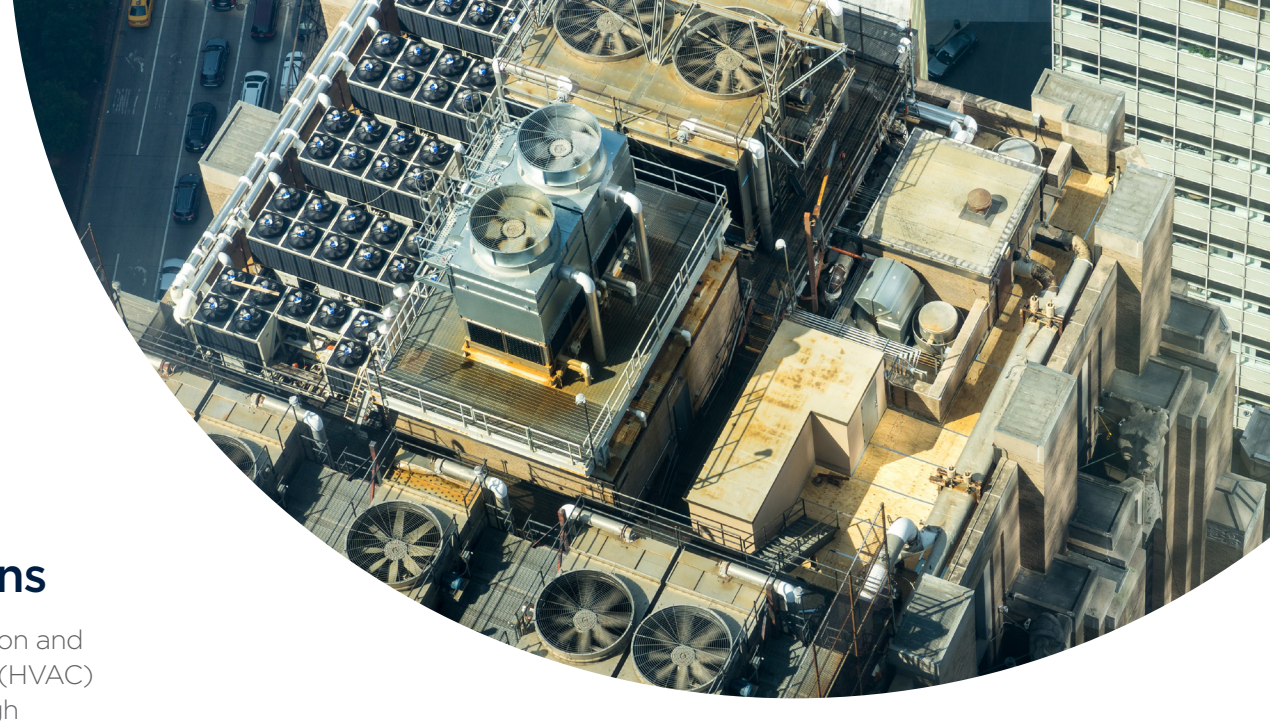


Integration PCB

The integration PCB connects to the sensor PCB enabling easy integration of MiniPID 2 into many applications. The integration PCB functionality includes: 4-20 mA input and output, Modbus® via RS485 and can be configured to switch a relay on at a given VOC concentration. The integration PCB can be configured with a bespoke SDK MS Windows application.

Gas Delivery Hood

The Gas Delivery hood allows impressed gas flow to MiniPID 2.
Push fit pipe connectors offer convenient connection of the MiniPID 2 to a pump or existing gas systems.



Typical applications

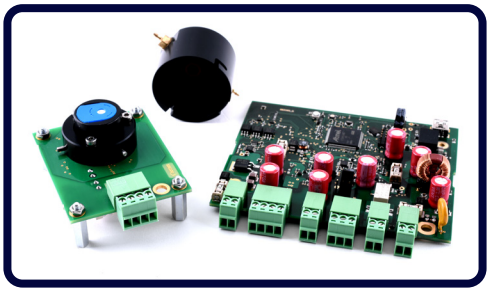
- Heating, Ventilation and Air Conditioning (HVAC) filter breakthrough
- HVAC air quality monitoring and control
- Fenceline monitoring
- Connect to Arduino or Raspberry pi for IoT sensor applications
- Indoor air quality monitoring
- Outdoor air quality monitoring
- Laboratory air monitoring

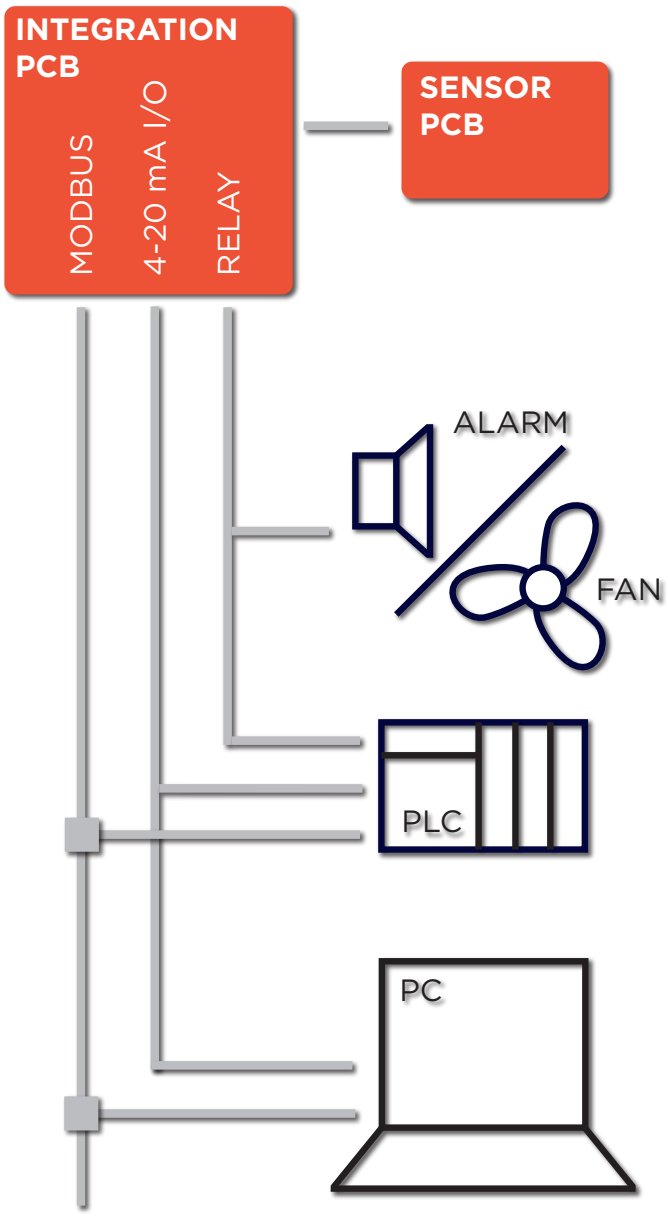
Features

- Industrially proven technology
- 4-20 mA input and output
- Modbus® communication
- Data logging
- Simple sensor calibration
- MS Windows compatible configuration software
- Bayonet locking gas hood
- Easy sample delivery
- Small footprint for easy integration

Benefits

- Reduced time to market
- Reduced R&D costs





Technical specifications

Sensor PCB

Dimensions in mm
- 50 (W) x 62 (D) x 40(H) (Total height with hood)

Output
- Analogue 0 to rail voltage

Input voltage
- 5 Vdc ± 0.5 V

Working temperature
- -20 °C to +60 °C

Humidity resistant
- 0 to 99% RH non condensing

Integration PCB

Dimensions in mm
- 99 (W) 85 (D) 20.5 (H)

Outputs
- Modbus RS485
- Relay (250 Vac / 2A)
- 4-20 mA outputs
- USB to MS Windows

Input voltage
- 12 to 30 Vdc ±0.5 V

Working temperature
- -20 °C to +60 °C

Humidity resistant
- 0 to 99% RH non condensing

Gas delivery hood

Dimensions in mm
- 35.5 Ø x 26.5 (H)

Pipe connection
- 1/16" OD barb push fit
- 1/16" ID / 1/8" OD fluorinated pipe recommended

Seal material
- Viton

Max gas pressure
- 50 mBar

Max flow rate
- 300 mBar

Part Description	Part number
• Sensor PCB	A-886101
• Gas delivery hood	A-886215
• Integration PCB	A-887101
• Sensor development kit	SDK

Compatible MiniPID 2 sensors:	Voltage	Part number
• MiniPID 2 PPM	3.6V-10V or 3.6-18V	MP3SMLL *U2
• MiniPID 2 PPM WR	3.6V-10V or 3.6-18V	MP3SMLL *U2
• MiniPID 2 PPB	3.6V-10V or 3.6-18V	MP3SBLB *U2
• MiniPID 2 PPB WR	3.6V-10V or 3.6-18V	MP3SBLB *U2
• MiniPID 2 HS	3.6V-10V or 3.6-18V	MP3SMLL *U2
• MiniPID 2 10.0 eV	3.6V-10V or 3.6-18V	MP3SMLL *U2
• MiniPID 2 11.7 eV	3.6V-10V or 3.6-18V	MP3SMLL *U2

Note: * indicates either a C for 3.6-10V or an N for 3.6-18V. For example, MP3SMLLCU2 = 3.6-10V.

SDK V1.2 This publication is not intended to form the basis of a contract and specifications can change without notice.

Manufactured by:

ION Science Inc
4153 Bluebonnet drive,
Stafford, Texas 77477

T Toll Free (877) 864-7710
E info@ionscienceusa.com